UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/507,064 | 03/28/2005 | Taizo Kobayashi | 10921.247USWO | 8905 |

52835 7590 05/06/2010

HAMRE, SCHUMANN, MUELLER & LARSON, P.C.
P.O. BOX 2902
MINNEAPOLIS, MN 55402-0902

| EXAMINER | |
|---|---|
| BALL, JOHN C | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1795 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 05/06/2010 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/507,064 | KOBAYASHI, TAIZO | |
| | Examiner | Art Unit | |
| | J. CHRISTOPHER BALL | 1795 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *28 January 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-11 and 14-18* is/are pending in the application.

4a) Of the above claim(s) *14-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Summary*

1. This Office Action is based on the Amendment filed with the Office on January 28, 2010, regarding the KOBAYASHI application.

2. Claims 1-11 and 14-18 are currently pending and claims 1-11 have been fully considered. Claims 14-18 remain withdrawn as being drawn to an unelected species.

### *Election/Restrictions*

3. Applicant's election with traverse of Examiner's exclusion of claims 14-18 as reading on elected Species I in the reply filed on January 28, 2010, is acknowledged. The traversal is on the ground(s) that Applicant believes claims 14, 15, and 17 are broad enough to read on elected Species I. This is not found persuasive because Species I, as shown in Figures 5 and 7-10 of the instant application, includes an information recognizing analyzer wherein the electro-physical quantity variable part comprises a pair of electrodes surrounded by elastic members where the volume defined by the elastic members is variable (see Figure 9). Claims 14, 15, and 17 do not claim these features. Therefore, claims 14-18 not broad enough to read on Species I, but are drawn to Species III, as shown in Figures 27A & 27B of the instant application.

   The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over LEWIS et al. (US 6,773,671 B1) in view of KERMANI et al. (US 2003/0098233 A1).

Regarding claim 1, LEWIS discloses a multichemistry measuring device, wherein is taught an information recognizing analyzer used with an analyzing article attached thereto (Figures 4 and 5), for analysis of a specific component in a sample liquid (Col. 3, lines 50-59) supplied to the analyzing article (Col. 4, lines 35-37), comprising:

an information recognizer, in the form of a test port with flexible and static pins (Col. 9, lines 54-58; 540 & 580, Figure 5) for recognizing of information added to the analyzing article, in the form of an indicator (522, Figure 5),

wherein the information recognizer includes an electro-physical-quantity variable part, in the form of electrical communication between a flexible pin and static pin (Col. 9, lines 54-58), which has different electro-physical-quantities in accordance with the information added to the analyzing article, upon attachment of the analyzing article (Col. 9, lines 32-49).

LEWIS also teaches that resistance measurement made by the electro-physical-quantity variable part can be made where gradation of resistance is used to determine information, such as the indication of the strip type (Col. 10, lines 15-31). This teaching suggests a variable resistor.

LEWIS does not explicitly teach an electro-physical-quantity variable part comprising a variable capacitor.

However, KERMANI teaches capacitance and resistance measurements both can be derived from current measures (paragraph [0082]).

At the time of the present invention, it would have been obvious to one of ordinary skill in the art that one could substitute one known type of measurement, based on variable capacitance, for another type of measurement, based on variable resistance, with an expectation of a predictable result (*KSR International Co. v. Teleflex Inc., 550 U.S.__, 82 USPQ2d 1385 (2007)*).

Regarding claim 2, LEWIS teaches the electro-physical-quantity variable part includes a pair of a first and second electrode (540 & 580, Figure 5) in relative position relationship variable upon attachment of the analyzing article (Col. 9, lines 45-49).

Regarding claim 3, LEWIS teaches the first and second electrodes have the distance between the two varied, either being bridged (in contact) or not bridged (not in contact) (Col. 6, lines 48-58).

LEWIS also teaches that resistance measurement made by the electro-physical-quantity variable part can be made where gradation of resistance is used to determine information, such as the indication of the strip type (Col. 10, lines 15-31). This teaching suggests a variable resistor.

LEWIS does not explicitly teach an electro-physical-quantity variable part comprising a variable capacitor.

However, KERMANI teaches capacitance and resistance measurements both can be derived from current measures (paragraph [0082]).

At the time of the present invention, it would have been obvious to one of ordinary skill in the art that one could substitute one known type of measurement, based on variable capacitance, for another type of measurement, based on variable resistance, with an expectation of a predictable result (*KSR International Co. v. Teleflex Inc., 550 U.S.__, 82 USPQ2d 1385 (2007)*).

Regarding claim 4, LEWIS teaches at least one of the first and second electrodes in the information recognizer further includes a fixed elastic member, in the form of the flexible pin (540, Figure 5), the distance between the first and the second electrodes being varied by an elastic deformation of the elastic member, as the flexible pin is either made to contact the static pin or no contact is made dependant upon the presence of the indicator (Col. 6, lines 48-58).

LEWIS also teaches that resistance measurement made by the electro-physical-quantity variable part can be made where gradation of resistance is used to determine information, such as the indication of the strip type (Col. 10, lines 15-31). This teaching suggests a variable resistor.

LEWIS does not explicitly teach an electro-physical-quantity variable part comprising a variable capacitor.

However, KERMANI teaches capacitance and resistance measurements both can be derived from current measures (paragraph [0082]).

At the time of the present invention, it would have been obvious to one of ordinary skill in the art that one could substitute one known type of measurement, based on variable capacitance, for another type of measurement, based on variable resistance, with an expectation of a predictable result (*KSR International Co. v. Teleflex Inc., 550 U.S.__, 82 USPQ2d 1385 (2007)*).

Regarding claim 5, LEWIS teaches distance between the first and the second electrodes being varied by an elastic deformation of the elastic member, as the flexible pin is either made to contact the static pin or no contact is made dependant upon the presence of the indicator (Col. 6, lines 48-58), such variability inherently changing the area of mutually opposed surface due to the curve shape of the flexible pin (540, Figure 5).

Regarding claim 6, LEWIS teaches the flexible pin, which is at least one of the first and second electrodes, that moves upon attachment to the analyzing article, as to make contact with the static pin (Col. 6, lines 48-58), wherein the curved shape of the flexible pin will translate some of the motion of the flexible pin in the direction of the insertion of the analyzing article.

LEWIS also teaches that resistance measurement made by the electro-physical-quantity variable part can be made where gradation of resistance is used to determine information, such as the indication of the strip type (Col. 10, lines 15-31). This teaching suggests a variable resistor.

LEWIS does not explicitly teach an electro-physical-quantity variable part comprising a variable capacitor.

However, KERMANI teaches capacitance and resistance measurements both can be derived from current measures (paragraph [0082]).

At the time of the present invention, it would have been obvious to one of ordinary skill in the art that one could substitute one known type of measurement,

based on variable capacitance, for another type of measurement, based on variable resistance, with an expectation of a predictable result (*KSR International Co. v. Teleflex Inc., 550 U.S.__, 82 USPQ2d 1385 (2007)*).

Regarding claim 7, LEWIS teaches the electro-physical-quantity variable part includes a pair of a first and second electrode (540 & 580, Figure 5) in relative position relationship variable upon attachment of the analyzing article (Col. 9, lines 45-49), information being recognized individually from each pair of electrodes, in the form of closing a circuit by contacting of the electrodes (Col. 5, lines 42-44).

LEWIS also teaches that resistance measurement made by the electro-physical-quantity variable part can be made where gradation of resistance is used to determine information, such as the indication of the strip type (Col. 10, lines 15-31). This teaching suggests a variable resistor.

LEWIS does not explicitly teach an electro-physical-quantity variable part comprising a variable capacitor.

However, KERMANI teaches capacitance and resistance measurements both can be derived from current measures (paragraph [0082]).

At the time of the present invention, it would have been obvious to one of ordinary skill in the art that one could substitute one known type of measurement, based on variable capacitance, for another type of measurement, based on

variable resistance, with an expectation of a predictable result (*KSR International Co. v. Teleflex Inc., 550 U.S.__, 82 USPQ2d 1385 (2007)*).

Regarding claim 8, LEWIS does not explicitly teach a capacity measurer.

However, KERMANI teaches capacitance and resistance measurements both can be derived from current measures (paragraph [0082]).

At the time of the present invention, it would have been obvious to one of ordinary skill in the art that one could substitute one known type of measurement, based on capacitance, for another type of measurement, based on resistance, with an expectation of a predictable result (*KSR International Co. v. Teleflex Inc., 550 U.S.__, 82 USPQ2d 1385 (2007)*).

7. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over LEWIS et al. (US 6,773,671 B1) in view of KERMANI et al. (US 2003/0098233 A1) and EILERSEN (US 4,175,428).

Regarding claim 9, LEWIS discloses a multichemistry measuring device, wherein is taught an information recognizing analyzer used with an analyzing article attached thereto (Figures 4 and 5), for analysis of a specific component in a sample liquid (Col. 3, lines 50-59) supplied to the analyzing article (Col. 4, lines 35-37), comprising:

an information recognizer, in the form of a test port with flexible and static pins (Col. 9, lines 54-58; 540 & 580, Figure 5) for recognizing of information added to the analyzing article, in the form of an indicator (522, Figure 5),

wherein the information recognizer includes an electro-physical-quantity variable part, in the form of electrical communication between a flexible pin and static pin (Col. 9, lines 54-58), which has different electro-physical-quantities in accordance with the information added to the analyzing article, upon attachment of the analyzing article (Col. 9, lines 32-49), and

wherein the electro-physical-quantity variable part includes a pressure sensitive electrical conductor, in the form of a flexible pin (540, Figure 5), having a resistance value variable upon attachment of the analyzing article (Col. 10, lines 17-27).

LEWIS also teaches that resistance measurement made by the electro-physical-quantity variable part can be made where gradation of resistance is used to determine information, such as the indication of the strip type (Col. 10, lines 15-31). This teaching suggests a variable resistor.

LEWIS does not explicitly teach an electro-physical-quantity variable part comprising a variable capacitor.

However, KERMANI teaches capacitance and resistance measurements both can be derived from current measures (paragraph [0082]).

At the time of the present invention, it would have been obvious to one of ordinary skill in the art that one could substitute one known type of measurement,

based on variable capacitance, for another type of measurement, based on variable resistance, with an expectation of a predictable result (*KSR International Co. v. Teleflex Inc., 550 U.S.__, 82 USPQ2d 1385 (2007)*).

Neither LEWIS nor KERMANI explicitly teach the pressure sensitive electric conductor has a variable volume to provide a resistance value variable upon attachment of the analyzing article.

However, EILERSEN discloses a capacitive dynamometer comprising an elastic body which will deform, i.e., change volume, upon application of a mechanical force (Col. 1, lines 24-33), wherein the change in volume will change the capacitance.

At the time of the present invention, it would have been obvious to one of ordinary skill in the art to modify the device taught by LEWIS to incorporate the deformable capacitive dynamometer as taught by EILERSEN for determining capacitance change because the taught deformable capacitive dynamometer is not subject to errors resulting in changes of temperature (EILERSEN, Col. 2, lines 8-15).

Regarding claim 10, LEWIS in view of KERMANI and EILERSEN teaches the limitations of claim 9, above. It has been held mere duplication of parts, such as to produce a plurality of pressure sensitive electric conductors in the instant case, has no patentable significance (*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Regarding claim 11, LEWIS teaches a resistance value measurer (Col. 10, lines 23-24); and also teaches measuring of an arbitrarily large number of different indicators to indicate a particular type of analyzing article (Col. 10, lines 24-32), which would inherently require comparison between with a predetermined threshold for such an identification to be possible.

***Response to Arguments***

8. Applicant's arguments, see Remarks, p. 7-9, filed January 28, 2010, with respect to the rejection(s) of claim(s) 1-11 under 35 USC 102(b), 35 USC 102(e), or 35 USC 103(a) have been fully considered and are persuasive. Therefore, the previous rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of reconsideration of the teaching of the prior art reference, LEWIS et al., and the newly found prior art, EILERSEN.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. CHRISTOPHER BALL whose telephone number is (571)270-5119. The examiner can normally be reached on Monday through Thursday, 9 am to 5 pm Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nam X Nguyen/
Supervisory Patent Examiner, Art Unit 1753

JCB
05/05/2010